

### **REMARKS**

Claim 1 has been amended, and claim 23 has been canceled. No new matter has been added by way of these amendments.

### **Claim Objections**

Claim 1 has been amended and claim 23 has been canceled where the informalities have been addressed.

### **Claim Rejections – 35 U.S.C. § 102**

Claims 1, 4, 5, 10, 11, 14-17, 19 and 23-27 stand rejected under 35 U.S.C. 102(b) as being anticipated by Ioanesian et al. (US 3,728,040). Without acquiescing in this rejection and to expedite further prosecution, Applicants have amended independent claim 1 to recite that the braking shaft consists of one or more bodies rotatably connected to the braking shaft. Also, Applicants have canceled independent claim 23 without prejudice. The Office Action admits that Ioanesian's braking shaft includes blades 11 that are not rotatably connected to the braking shaft, since blades 11 are fixed to the housing 3. (See, Office Action at page 7; see also, Ioanesian at column 3, lines 14-15.) As such, Ioanesian fails to anticipate the drilling apparatus as claimed in current independent claim 1. Nor does Ioanesian anticipate claims 4, 5, 10, 11, 14-17, 19 and 24-27, because those claims depend variously from claim 1. Claim 23 has been canceled, so the 102 rejection of claim 23 over Ioanesian is now moot.

Claims 23-25, 28 and 29 stand rejected under 35 U.S.C. 102(b) as being anticipated by Ranzi (US 3,728,040). Without acquiescing in this rejection and to expedite further prosecution, Applicants have canceled claim 23. Thus, the 102 rejection of claim 23 over Ranzi is now moot. Applicants note that claims 24, 25, 28 and 29 depend from claim 1, not claim 23. The Office Action did not cite Ranzi with respect to independent claim 1, which is appropriate since Ranzi is directed to an airplane compressor that is not suitable for use in a drilling apparatus to be

operated with a drilling fluid, as recited in claim 1. As such, the 102 rejection of claim 24, 25, 28 and 29 over Ranzi is improper and should be withdrawn.

**Claim Rejections – 35 U.S.C. § 103**

Claim 28 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ioanesian in view of Hagen (US 3,880,547), and claim 29 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Ioanesian. As discussed above, current independent claim 1 is patentable over Ioanesian. Hagen was cited with respect to the features of claim 28 and does not cure the deficiencies of Ioanesian. Since claims 28 and 29 depend from claim 1, claim 28 is patentable over Ioanesian in view of Hagen and claim 29 is patentable over Ioanesian.

### CONCLUSION

Consideration of the foregoing amendments and remarks, and reconsideration of the application is respectfully requested by Applicants. It is believed that the Office Action dated December 22, 2010 has been fully addressed, and that the application is now in condition for allowance and Applicants earnestly seeks such by the Examiner. If any fee is due as a result of filing this paper, please appropriately charge such fee to Deposit Account No. 50-2183 (Ref. No. 21.1106) and please credit any excess fees to such deposit account.

If the Examiner deems that any issue remains after considering this paper, the Examiner is invited to contact the undersigned attorney to expedite the prosecution of the application and engage in a joint effort to work out a mutually satisfactory solution.

Schlumberger Technology Corporation  
Sugar Land Product Center  
200 Gillingham Lane, MD 200-9  
Sugar Land, Texas 77478  
(281) 285-8377  
(281) 285-8821 Fax  
Date: March 11, 2011

Respectfully submitted,

/Jianguang Du/  
Jianguang Du  
Reg. No. 61,385  
Attorney for Assignee